

# A Chemical Accident Is Happening Every Two Days on Average

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✓ Fact Checked

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## STORY AT-A-GLANCE

- › During the first seven weeks of 2023, the Coalition to Prevent Chemical Disasters (CPCD) reported 30 chemical accidents in the U.S., or one every 1.5 days
- › On average, one estimate suggests accidental chemical releases due to train derailments, leaks from industrial plants, truck accidents and pipeline ruptures occur every two days
- › Every U.S. state is home to chemical facilities that store or use hazardous chemicals, such as fertilizer plants, petroleum refineries, chemical manufacturers, wastewater treatment plants and more
- › In all, about 12,500 such facilities exist in the U.S., and 39% of the population – nearly 124 million people – live within 3 miles of one
- › In the event of a fire or spill, people up to 25 miles away from these industrial and commercial sites can be affected; many low-income communities are disproportionately affected by these risks

Hearing news of toxic chemical accidents – like the February 2023 Ohio train derailment – is shocking. What’s alarming, however, is that many assume such disasters are rare occurrences when, in fact, they’re incredibly common.

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one estimate suggests accidental chemical releases due to train derailments, leaks from industrial plants, truck accidents and pipeline ruptures, occur every two days.<sup>1</sup>

## **Dangerous Chemical Accidents Occur Regularly**

It's a myth that chemical accidents are unusual in the U.S. CPCD maintains a list of such incidents, detailing at least 224 since January 1, 2022.<sup>2</sup> Among them:<sup>3</sup>

- February 25, 2023, a fire at Schulz Xtruded Products in Hernando, Mississippi, caused a container of hydrofluoric acid to leak into Mussacuna Creek.
- February 18, 2023, a fire broke out at Clean Harbors storage facility in Braintree, Massachusetts. Clean Harbors collects, transports and processes hazardous waste, and the trailers that caught fire were full of paints, epoxy, oil filters and solvents. Residents in the area were advised to shelter in place with their windows closed.
- February 16, 2023, a fire took place at Nursery Supplies in Kissimmee, Florida, which produces flower pots made from recycled plastics. Two acres of planters were burned, and residents were ordered to shelter in place.
- February 14, 2023, a tanker truck overturned in Tucson, Arizona, spilling explosive nitric acid and causing a fire that shut down parts of Interstate 10. The truck driver was killed and area residents were ordered to either evacuate or shelter in place.
- January 28, 2023, two train cars carrying propionic acid and acetic anhydride derailed, causing the chemicals to leak. About 130 people were evacuated as a result.

In 2013, after an explosion at a fertilizer facility in Texas killed 15 people, an executive order was issued, directing the EPA to provide new rules to help prevent disasters at chemical facilities. New rules were issued in 2017, but they were suspended and overturned soon after. According to CPCD:<sup>4</sup>

*“On August 19, 2022, the U.S. Environmental Protection Agency (EPA) proposed the Safer Communities by Chemical Accident Prevention (SCCAP) rule, which*

*made long-awaited revisions to the Risk Management Program (RMP), intended to prevent chemical disasters and regulate facilities that use or store highly hazardous chemicals.*

*But over 100 organizations have since urged the EPA to further strengthen its proposal in key ways 'to fully satisfy the law and the agency's core commitments on environmental justice [and] worker safety ...'*

*150 serious incidents at RMP facilities occur each year in the U.S. on average. This does not include the fires, releases, and explosions that occur with regularity at facilities not covered by the RMP, or hazardous materials being transported by rail or highway."*

## **39% of US Population Live Near a Hazardous Facility**

Every U.S. state is home to chemical facilities that store or use hazardous chemicals, such as fertilizer plants, petroleum refineries, chemical manufacturers, wastewater treatment plants and more.<sup>5</sup>

In all, about 12,500 such facilities exist in the U.S., and 39% of the population – nearly 124 million people – live within 3 miles of one.<sup>6</sup> Further, in the event of a fire or spill, people up to 25 miles away from these industrial and commercial sites can be affected.<sup>7</sup> Many low-income communities are disproportionately affected by these risks, which are compounded by threats from air pollution and lack of access to healthy foods.

A report by the Environmental Justice Health Alliance for Chemical Policy Reform (EJHA), Coming Clean and the Campaign for Healthier Solutions analyzed cumulative health hazards for those living in these areas, with a focus on Los Angeles; Houston and Dallas, Texas; Louisville, Kentucky; Albuquerque, New Mexico; and Charleston, West Virginia. It revealed:<sup>8</sup>

*"In most of the areas researched, large majorities of the population live in fenceline zones around highly hazardous facilities, and most schools and*

*medical institutions are located in these zones, at much greater rates than nationally.*

*... In addition to the constant threat of catastrophic chemical releases or explosions, in every area researched for this report fence-line zones face higher risk of cancer from toxic air pollution than the entire area (and often much higher than for the US as a whole). In 8 of the 9 areas, the potential for respiratory illness is higher in fence-line zones than for the entire area, and in every area is above the national rate."*

The Guardian also analyzed data related to U.S. chemical accidents. EPA data revealed 1,650 accidents at hazardous chemical facilities across the U.S. from 2004 to 2013, with disasters occurring at particularly high rates at petroleum, coal manufacturing and chemical manufacturing facilities.<sup>9</sup> From 2004 to 2020, accidents at hazardous chemical facilities occurred most often in Texas, followed by Louisiana, California, Illinois and Iowa.<sup>10</sup>

"What happened in East Palestine [the Ohio train derailment], this is a regular occurrence for communities living adjacent to chemical plants," Mathy Stanislaus, former assistant administrator of the EPA's office of land and emergency management, told The Guardian. "They live in daily fear of an accident."<sup>11</sup>

## **Three Serious Incidents in Two Weeks Show Need for Reform**

A report by EJHA and Coming Clean examined three chemical accidents that occurred within a two-week timeframe in January 2022. "These incidents caused significant harm to workers and communities ... [and] demonstrate the urgent need for commonsense reforms to the RMP rule, which is not currently doing enough to reduce hazards and prevent chemical fires, explosions and releases," the report notes.<sup>12</sup>

One incident took place January 31, 2022, at the Winston Weaver Fertilizer Plant in Winston-Salem, North Carolina. More than 1 million pounds of ammonium nitrate fertilizer were stored at the plant when a fire broke out. "Acrid smoke" filled the air and

6,500 people within a 1-mile radius were evacuated over explosion risks. Fine particulate matter in surrounding neighborhoods had reached hazardous levels when measured 36 hours later.

Further, “In their efforts to manage the fire, firefighters poured hundreds of thousands of gallons of water onto the site, creating toxic runoff that entered the nearby Monarcas Creek,” according to the report.<sup>13</sup> Despite this disaster, the EPA’s proposed revisions to the RMP rule do not cover ammonium nitrate.

“Many dangerous chemicals and facilities are currently exempt from disaster prevention requirements. EPA must expand the RMP program to cover ammonium nitrate production and storage facilities, as well as other highly hazardous chemicals,” the authors state.<sup>14</sup>

In another incident, an explosion occurred at Westlake Chemical South Plant in Westlake, Louisiana, January 26, 2022. This facility is the second largest chlorine facility in the Western Hemisphere and manufactures vinyl chloride, which is used to produce PVC (polyvinyl chloride).

A mushroom-shaped cloud appeared immediately after a loud boom was heard in the area. A chemical storage tank had exploded sending five employees to the hospital while 7,000 students sheltered in place at nearby schools. But the potential for even greater disaster exists. According to an RMP (risk management plan) created by the facility:<sup>15</sup>

*“A worst-case chemical incident could release up to 660,000 pounds of highly toxic gas that could travel up to 25 miles in radius, covering all of Lake Charles and more than a dozen smaller towns. This would immediately threaten more than 210,000 people with serious injury or death.”*

The third incident covered in the report occurred January 14, 2022, at Majestic Industries and Qualco Inc., in Passaic, New Jersey. Hundreds of firefighters battled a blaze that broke out at the facilities for days, leading to \$15 million in damages.

However, the fire came close to igniting a warehouse were 3 million pounds of chemicals, including chlorine pellets, were stored. If that had occurred, fire officials stated it could have caused “one of the most catastrophic chemical disasters in the region in recent history.”<sup>16</sup> Yet, the current RMP rule doesn’t account for adjacent or co-located facilities, considering them separate even when they’re part of the same complex.

## **Railroad Disasters Waiting to Happen**

February 3, 2023, a train carrying toxic chemicals [derailed in East Palestine, Ohio](#), a town near the Ohio-Pennsylvania border. In total, 38 rail cars derailed, and a massive fire that broke out damaged an additional 12 cars.<sup>17</sup> Five of the cars that derailed were carrying vinyl chloride, a flammable gas that can lead to life-threatening respiratory issues and an increased risk of cancer.

The East Palestine derailment, like many recent chemical incidents, serves as a wake-up call of the potential disaster looming. In this case, the lack of safety on U.S. railways became apparent, but it’s something railway workers have been warning of for years.

Every day, about 12,000 rail cars transporting toxic chemicals travel through cities across the U.S. Annually, 4.5 million tons of hazardous materials are shipped by trains in the U.S.<sup>18</sup>

Liquefied natural gas (LNG) may pose a particularly significant concern. In 2020, the U.S. Department of Transportation approved rail transport of LNG with no extra safety precautions, even though an accident could be catastrophic. In a letter to the U.S. Department of Transportation opposing the rule change, environmental group Earth Justice wrote:<sup>19,20</sup>

*“The amount of energy contained in LNG is quite alarming. One gallon of LNG has 0.89975 therms of energy. One DOT-113 tank car has a capacity of approximately 30,000 gallons, meaning that there would be approximately 27,000 therms worth of energy per tank car.*

*With this much LNG per tank car, it would only take 22 tank cars to hold the equivalent energy of the Hiroshima bomb.<sup>55</sup> A unit train of 110 LNG tank cars would thus have five-times the energy of the Hiroshima bomb.”*

U.S. Representative Nanette Barragan told The Guardian that we need the “same urgency” from the federal government given to the East Palestine train derailment “to focus on the prevention of these chemical disasters from occurring in the first place.”<sup>21</sup>

Yet, industry and even government opposition for enhanced emergency preparedness, new accident prevention requirements and other measures to enhance safety at facilities dealing with hazardous chemicals is fierce. As The Guardian reported:<sup>22</sup>

*“The US Chamber of Commerce has pushed back on stronger regulations, arguing that most facilities operate safely, accidents are declining and that the facilities impacted by any rule changes are supplying ‘essential products and services that help drive our economy and provide jobs in our communities.’*

*Other opponents to strengthening safety rules include the American Chemistry Council, American Forest & Paper Association, American Fuel & Petrochemical Manufacturers and the American Petroleum Institute.”*

## Sources and References

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- <sup>1, 5, 9, 10, 11, 21, 22</sup> [The Guardian February 25, 2023](#)
- <sup>2</sup> [Union of Concerned Scientists February 27, 2023](#)
- <sup>3, 4</sup> [Coalition to Prevent Chemical Disasters, Chemical Facility Incidents, Recent Incidents](#)
- <sup>6</sup> [Coalition to Prevent Chemical Disasters, Do You Live Near a Dangerous Chemical Facility?](#)
- <sup>7, 8</sup> [Environmental Justice for All, Life at the Fenceline: Understanding Cumulative Health Hazards in Environmental Justice Communities](#)
- <sup>12</sup> [Preventing Disaster September 20, 2022](#)
- <sup>13, 14</sup> [Preventing Disaster September 20, 2022, Page 5](#)
- <sup>15</sup> [Preventing Disaster September 20, 2022, Page 11](#)
- <sup>16</sup> [Preventing Disaster September 20, 2022, Page 16](#)
- <sup>17</sup> [National Transportation Safety Board \(NTSB\) February 14, 2023](#)
- <sup>18, 19</sup> [The Guardian February 11, 2023](#)
- <sup>20</sup> [Earth Justice January 13, 2020](#)